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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/844,441	04/30/2001	Aaron W. Buchwald	1875.0560004	9086
26111	7590	07/27/2005	EXAMINER	
STERNE, KESSLER, GOLDSTEIN & FOX PLLC 1100 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005			ZHENG, EVA Y	
			ART UNIT	PAPER NUMBER

2634

DATE MAILED: 07/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/844,441

Applicant(s)

BUCHWALD ET AL.

Examiner

Eva Yi Zheng

Art Unit

2634

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 February 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 27-31 is/are allowed.
- 6) ☒ Claim(s) 20 and 26 is/are rejected.
- 7) ☒ Claim(s) 1-19, 21-25, 33 and 34 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-31 and 33-34 have been considered but are moot in view of the new ground(s) of rejection.

Claim Objections

2. Claims 1 and 8 are objected to because of the following informalities:

Regarding claims 1 and 8, Please add: --:-- after word "including" on line 4 and 5, respectively.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 20 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shaffer et al (6,678,842 B1) in view of Moon et al. (IEEE).

a) Regarding claim 20, Shaffer et al. disclose a method in a communication device, comprising:

(a) generating a master timing signal (42 in Fig. 1; Col 7, L12-20);

Art Unit: 2634

(b) generating multiple time-staggered sampling signals based on the master timing signal (inherent as 25-29 in Fig. 1);

(c) sampling a received, analog serial data signal in accordance with each of the multiple time-staggered sampling signals, thereby producing multiple time-staggered data sample streams (56 in Fig. 1); and

(d) time-deskewing the multiple time-staggered data streams (45 in Fig. 1).

Shaffer et al disclose all the subject matters described above except for the specific teaching of a demultiplexing multiple time-deskewed data streams produced in step (d).

However, Moon et al. disclose a deskewing mechanism comprise a sampler, delay adjustment range control, and demux (Fig. 3). It is well known that skew is clock time delay and undesirable in communication system. Therefore, it is obvious to one of ordinary skill in art to implement a demultiplexer as taught by Moon et al. in the deskewer of Shaffer et al. By doing so, aligning received signals and permit high data rates transmission over longer distance.

b) Regarding claim 26, Moon et al. disclose the method of claim 20, further comprising:

(f) transmitting a second analog serial data signal in accordance with the master timing signal (DAC in Fig. 3).

Allowable Subject Matter

5. Claims 1-19, 33 and 34 would be allowable if rewritten to overcome the objections, set forth in this Office action.

6. Claims 27-31 allowed.

7. The following is an examiner's statement of reasons for allowance:

None of the prior art teaches or suggests a multiple channel communication device comprise: a master signal generator; a receive-lane including a sampling signal generator for time-staggered sampling signals based on the master timing signal, a data path to sample and quantize the sampling signal, produce multiple time-staggered data sample streams, and a demultiplexer adapted to time-deskew the multiple time-staggered data streams; wherein the sampling comprise quantizing each of the multiple serial data signals and rotating the interpolated phase of each sampling signal at a rate corresponding to a frequency offset between the sampling signal and the corresponding serial data signal so as to reduce the frequency offset between the sampling signal and the corresponding serial data signal.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eva Y Zheng whose telephone number is 571 272-3049. The examiner can normally be reached on M-F, 7:30 AM to 5:00 PM.


Art Unit: 2634

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on 571 272-3056. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

July 21, 2005

Eva Yi Zheng
Examiner
Art Unit 2634


SHUWANG LIU
PRIMARY EXAMINER